Case Report

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Prurigo Nodularis: Improved Quality of Life with The Use of Dupilumab

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ABSTRACT

Introduction: Prurigo nodularis is a chronic inflammatory dermatosis characterized by pruritic, firm, often lichenified, and difficult-to-manage papules and nodules. It is associated with other diseases like psychiatric disorders.

Case report: A 32-year-old man presented with intense pruritus for 6 years with lichenified and excoriated papules and nodules that impact on sleep and causes absences from work. The anatomopathological was compatible with nodular prurigo. After 6 months of using dupilumab 600 mg every 2 weeks there was significant improvement in quality of life.

Discussion: Prurigo nodularis lesions result from a cycle of pruritus and excoriation. Treatment is challenging. Early recognition and appropriate treatment are essential to interrupt the cycle of pruritus and excoriation, restoring the patient's functionality.

Introduction

Prurigo nodularis is a chronic inflammatory dermatosis characterized by pruritic, firm, often lichenified, and difficult-to-manage papules and nodules. It mainly affects adults between 50 and 60 years of age, with a higher prevalence in women and African Americans. It is associated with atopic, neuropathic, systemic diseases, and psychiatric disorders. The pathophysiology involves persistent activation of sensory nerve fibers and Th2 cells, with release of IL-4 and IL-13, perpetuating pruritus, and inflammation. We present below a case report of a patient with early onset prurigo nodularis with a high impact on quality of life [1,2].

Case Report

A 32-year-old man, a plastics industry worker, presented with intense pruritus for 6 years and the appearance of lesions initially on the hands, progressing to the arms, legs, and back. The lesions increased in size, thickness, and number, with constant pruritus, impact on sleep, and absences from work. The initial DLQI (Dermatology Life Quality Index) was 23. The patient used prednisone, methotrexate, antihistamines, doxepin, emollients, and topical corticosteroids, without improvement. On examination, the patient presented several erythematous-violaceous, lichenified, and excoriated papules and nodules on the hands, arms, back, abdomen, thighs, legs, and feet (Figure 1). The anatomopathological examination revealed hyperkeratosis, hypergranulosis, parakeratosis, irregular acanthosis with elongation of the epidermal ridges, and dermis with fibroblastic and capillary proliferation and chronic perivascular and interstitial inflammatory infiltrate, compatible with nodular prurigo (Figure 2&3). Dupilumab 600 mg every 2 weeks was started [3,4]. After 6 months, there was significant improvement in pruritus, reduction in lesion thickening, and a DLQI of 6. The patient reported significant improvement in quality of life (Figure 4).

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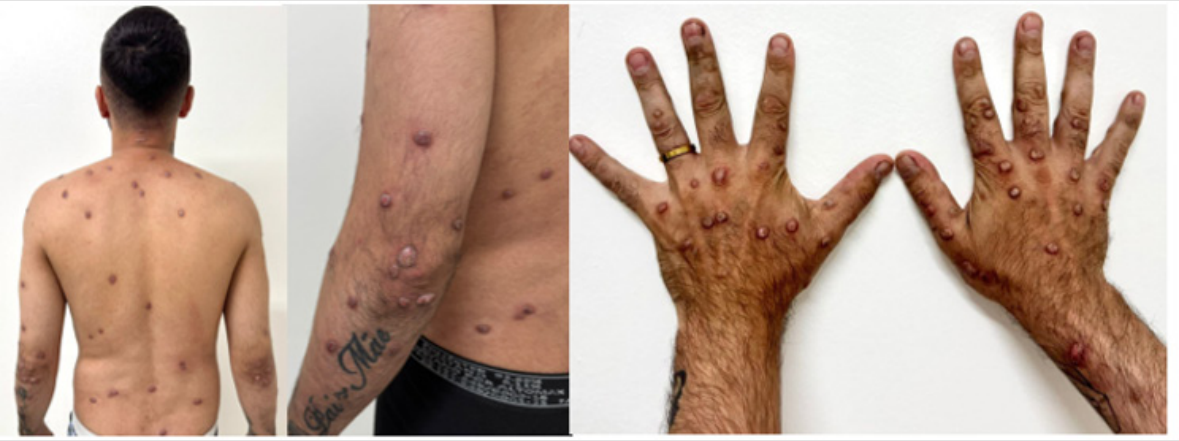

Figure 1: Erythematous-violaceous, lichenified, and excoriated papules and nodules on the hands, arms and back.

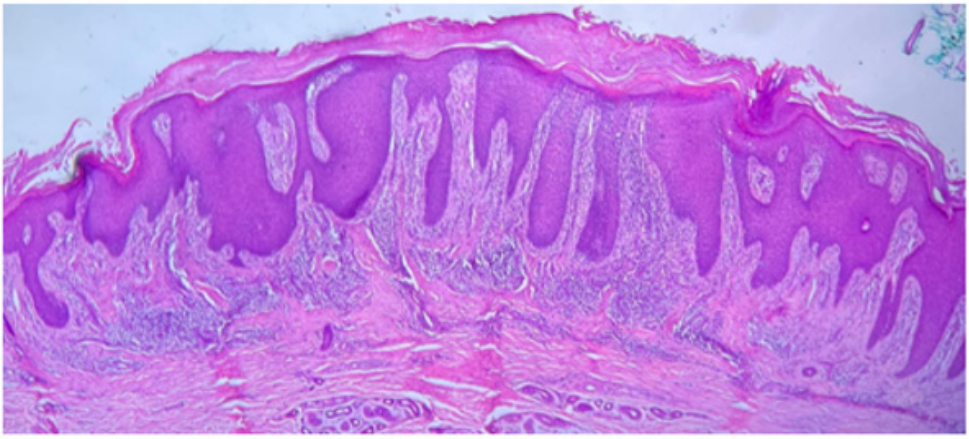

Figure 2: Hyperkeratosis, hypergranulosis, parakeratosis, irregular acanthosis with elongation of the epidermal ridges, and dermis with fibroblastic and capillary proliferation and chronic perivascular and interstitial inflammatory infiltrate, compatible with nodular prurigo at the anatomopathological examination. HE 40x.

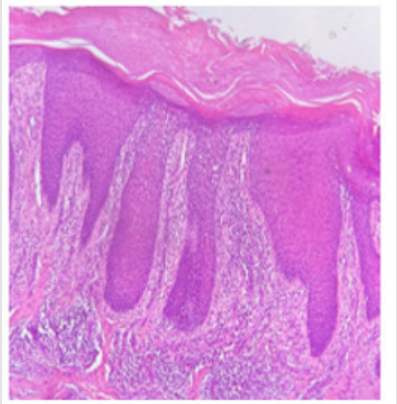

Figure3: Anatomopathological examination.HE100x.

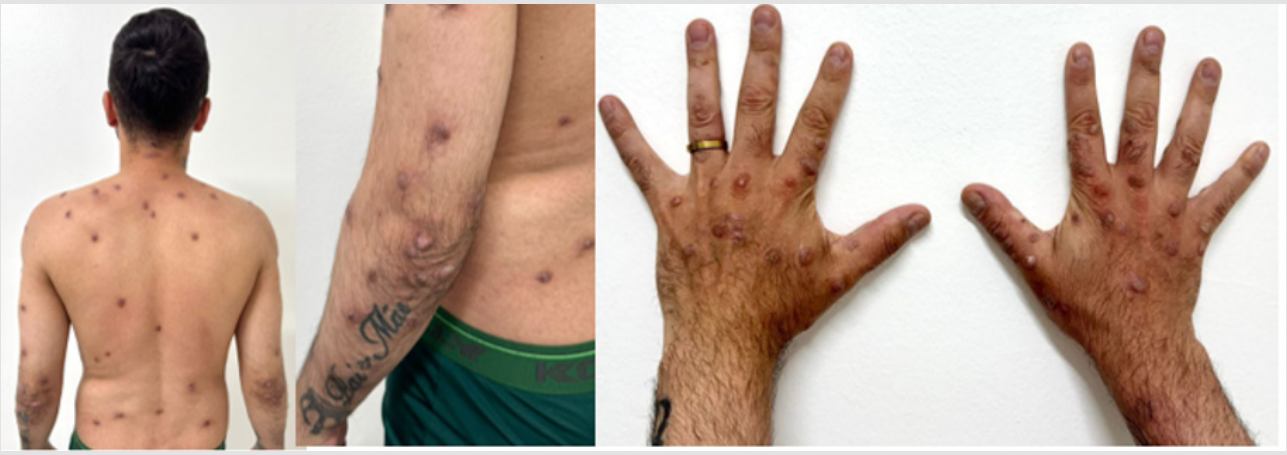

Figure 4: Lesions Improvement After 6 Months Dupilumab.

Discussion

Prurigo nodularis lesions result from a cycle of pruritus and excoriation. The impact on quality of life is severe, greater than in psoriasis and atopic dermatitis, conditions in which pruritus is a prominent feature. Intractable pruritus, sleep disturbances, depressive symptoms, and impairment of daily activities may occur. Anxiety is estimated to occur in 37% of patients, depression in 29%, and suicidal ideation in 19%. The DLQI index helps to quantify this impact. Treatment is challenging, traditionally based on topical or systemic corticosteroids, antihistamines, immunosuppressants such as methotrexate and thalidomide, and neurological modulators. Dupilumab, [5,6] a monoclonal antibody that blocks IL-4 and IL-13 receptors, has demonstrated efficacy in controlling pruritus and lesions in refractory cases. Studies indicate improvement in symptoms and DLQI, with a good safety profile.

Conclusion

Prurigo nodularis is a debilitating dermatosis with a major impact on quality of life. The case described illustrates a young patient with refractoriness to conventional treatments and the efficacy of dupilumab in reducing symptoms and improving well-being. Early recognition and appropriate treatment are essential to interrupt the cycle of pruritus and excoriation, restoring the patient's functionality.

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